REMARKS

The Office Action dated April 11, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-5 and 22-26 have been cancelled without prejudice or disclaimer. Claims 35-39 have been added. No new matter has been added. Claims 6-21 and 27-39 are submitted for consideration.

Claims 1-34 were rejected were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Publication No. 2002/0009974 to (hereinafter Kuwahara). The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in claims 6-21 and 27-34 and newly added claims 35-39.

Claim 6, upon which claims 7-13 and 36 depend, recites a time stamping method in a telecommunication system. The method includes receiving, in a base station, a time reference signal providing time reference in the telecommunication system and generating an idle period in the transmission of a base station. The method also includes determining, in the base station, time characteristics of the idle period relative to the time reference by means of a power measurement and providing at least a portion of data to be transmitted from the base station with time characteristics proportional to the time reference by using time characteristics of the idle period.

Claim 14, upon which claims 15-21 and 37 depend, recites a telecommunication system including a base station for providing radio transmission and reception for mobile stations. The base station includes a time reference signal receiving unit for receiving a time reference signal providing time reference in the telecommunication system and an idle period generator for generating an idle period in the transmission of the base station. The base station also includes a detecting unit operationally connected to the idle period generator and the time reference signal receiving unit for determining time characteristics of the idle period relative to the time reference by means of a power measurement. The base station further includes a time stamping unit operationally connected to the detecting unit for providing at least a portion of data to be transmitted from the base station with the time characteristics proportional to the time reference by using the time characteristics of the idle period.

Claim 27, upon which claims 28-34 and 38 depend, recites a time stamping mechanism in a telecommunication system. The mechanism includes receiving means for receiving, in a base station, a time reference signal providing time reference in the telecommunication system and generating means for generating an idle period in the transmission of a base station. The mechanism also includes determining means for determining, in the base station, time characteristics of the idle period relative to the time reference by means of a power measurement and providing means for providing at least a portion of data to be transmitted from the base station with time characteristics proportional to the time reference by using time characteristics of the idle period.

Claim 35, upon which claim 39 depends, recites a base station of a telecommunication system. The base station includes a time referencing signal receiving unit configured to receive a time reference signal providing time reference in the telecommunication system and an idle period generator configured to generate an idle period in the transmission of the base station. The base station also includes a detecting unit operationally connected to the idle period generator and the time reference signal receiving unit, the detecting unit configured to determine time characteristic of the idle period relative to the time reference by means of a power measurement and a time stamping unit operationally connected to the detecting unit and configured to provide at least a portion of data to be transmitted from the base station with the time characteristics proportional to the time reference by using the time characteristic of the idle period.

As outlined below, the cited reference of Kuwahara does not teach or suggest the all of the elements of the pending claims.

Kuwahara discloses wireless communication base station transmission timing offset correction system including an accurate time reception antenna 13, which receives a signal including at least one accurate time value and outputs the accurate value at reception of the signal transmitted from the wireless base station. The system further includes a cellular antenna 16 that receives the signal transmitted from the base station antenna and outputs a reception time value of the signal transmitted from a wireless base station antenna 10. See paragraph 0013 of Kuwahara. Figure 3 and paragraph 0034 of Kuwahara also discloses that a transmission timing measurement apparatus 20, 21, 22

includes a GPS antenna 13 and a cellular antenna 16. The GPS receiver 14 determines the geographic position at which the transmission timing measurement apparatus 21 is located, and the exact time of the signals received by the GPS antenna 13 from the GPS satellites 1, 2, 3, and generates a reference GPS clock signal. The cellular communication unit 23 receives a signal transmitted from a base station antenna 10 via the cellular antenna 16, and measures the reception timing of the pilot signal of the corresponding base station 5, 6, 7. The measurement of the pilot signal may include, for example, the use of a sliding correlator matched with the pilot signal transmitted by the base station 5, 6, 7, to thereby measure the timing of signal reception from the phase in which correlation becomes more significant.

Paragraph 0029 of Kuwahara also discloses that cable delays occur when a signal is inputted from the GPS antenna 13, or the cellular antenna 16, to the respective receiver 14, 17. Cable delays may also occur within the receiver, or over the connection between the receiver 14, 17 and the reference clock generator 15. However, for a position measurement, no error in terminal position measurement will occur if the relative reception timing difference of the signal transmitted from each base station, i.e. time difference of arrival (TDOA), is accurately calculated. Therefore, any additional error due to unforeseen cable delays or the like is reduced or eliminated through the use of a transmission timing measurement apparatus 18 of an equivalent cable length and having equivalent component delays. Kuwahara further disclose that a reception timing measurement apparatus 24, such as a reference clock generator 15, measures, on the basis

of the accurate clock obtained by the GPS receiver 14, the comparative accuracy of the reception timing of the pilot signal as determined by the comparison of the cellular communication unit 23 and the GPS receiver 14. See paragraph 0035 of Kuwahara.

Applicant submits that Kuwahara fails to teach or suggest each of the elements of the presently pending claims. Kuwahara. fails to disclose the idle period and the power measurement of the idle period when determining time characteristics of the idle period relative to the time reference, as recited in the pending claims. Furthermore, Kuwahara fails to disclose that at least a portion of data to be transmitted from the base station is provided with time characteristics proportional to the time reference by using time characteristics of the idle period, as recited in the pending claims. In the present invention, the time characteristics of the idle period relative to the time reference are determined by means of a power measurement. The power measurement takes place in the base station, i.e. in a transmitting network element. Kuwahara suggests measuring the reception timing of the pilot signal, where the measurement is based on a sliding correlator. Thus, Kuwahara's solution involves digital processing of the pilot signal and thus provides a more complicated way of determining the timing of a signal.

It is clear to a person of ordinary skill in the art that a power measurement provides a more fundamental and faster way of determining a signal timing. As is known to one skilled in the art, it is not necessary to subject an idle period to a digital process, such as sliding correlation. Therefore, using the teachings of Kuwahara, one skilled in the

art would not have ended up with the elements recited in the presently pending claims in that the idle periods are subjected at power measurements in the base station.

Paragraphs 0046-0047 of the current application specify the characteristics of the idle period and the power measurement. Specifically, paragraph 0046 states:

> In an embodiment, the idle period generator 114 shown in Figure 1 is implemented in the digital signal processor of the base band unit 112. In an embodiment, the idle period 116, 200 is generated by weighting a signal so that a required time mask is achieved. In an embodiment, the length 214 of the idle period is 2560 chips, and the ramps associated with the leading edge 216 and the trailing edge are 27 chips long. The attenuation 224 associated with the idle period 200 with respect to the reference transmit power 222 may vary from 20 dB to 45 dB, for example. The large power dynamics due to attenuation 224 and the steep edges 216, 218 of the idle period 116, 200 enable efficient detection and identification of the idle period 116, 200 by means of power measurement of the transmission of the base station 110.

Paragraph 0047 states that:

> Supplementary information on the idle period 116, 200 is available in the 3GPP (3rd Generation Partnership Project) specifications 25.214 and 25.433, which is thereby incorporated by reference. In an embodiment, the detecting unit 126 comprises a diode gauge 127 for power measurement operating at a radio frequency range. In an embodiment, the diode gauge 127 recognizes an idle period 116, 200 by detecting a decrease 212 in the transmit power of the idle period 116. 200. When a predefined threshold 220 in power is measured in the detecting unit 126, the time of measurement relative to the time reference 134, 202 is determined. In an embodiment, the time of measurement is a time characteristic of the idle period 116, 20.

The fact that the idle periods are subjected at power measurements at transmission in a base station is not obvious to a person skilled in the art. Furthermore, the fact that the data to be transmitted from the base station is with time characteristics proportional to

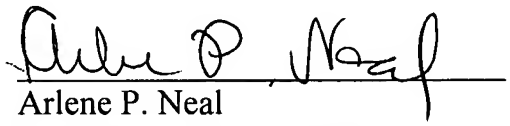
the time reference by using time characteristics of the idle period is not obvious to a person skilled in the art. Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. §102(b) should be withdrawn because Kuwahara does not teach or suggest each feature of claims 6, 14, 27 and 35 and hence, dependent claims 7-13, 15-21, 28-34 and 36-39 thereon.

As noted previously, claims 6-21 and 27-39 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 6-21 and 27-39 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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